

Notice of Allowability

Application No.

10/759,699

Applicant(s)

HOFFMAN ET AL.

Examiner

Mohammed Hasan

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/30/2004.
2. ☒ The allowed claim(s) is/are 82 - 109.
3. ☒ The drawings filed on 19 January 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

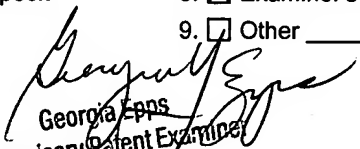
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800

DETAILED ACTION

Allowable Subject Matter

1. Claims 82 – 109 are allowed.
2. The following is an examiner's statement of reasons for allowance: The prior art taken either singularly or in a combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 82, 89, 92, 93, 102, and 108, for example which include a photolithography tool having a first, second, and third cubic crystalline optical elements have a common lattice direction aligned parallel to the optical axis and the first, second, and third cubic crystalline optical elements have their respective lattice selectively azimuthally rotated with respect to each other to reduce retardance over a substantial portion of the exit pupil, the first set of lobes of the first cubic crystalline optical element being selectively azimuthally rotated with respect to the second set of lobes of the second cubic crystalline optical element and the second set of lobes being selectively azimuthally rotated with respect to the third set of lobes of the third cubic crystalline optical element such that the first set of lobes, the second set of lobes and the third set of lobes are oriented differently with respect to each other (claim 82); and clocking the second cubic crystalline optical element with respect to first cubic crystalline optical element such that second set of lobes is selectively azimuthally

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rotated with respect to first of lobes and clocking the third cubic crystalline optical element with respect to the first cubic crystalline optical element such that third set of lobes is rotated about the optical axis with respect to the first set of lobes and third set of lobes and the second set of lobes being displaced by different amount an optical axis relative to the first set of lobes (claim 89) and two cubic crystalline optical elements have respective crystal lattices selectively azimuthally rotated about the optical axis such that a substantial portion of the retardance contributed by the first cubic crystalline optical element is substantially orthogonal to a substantial portion of the retardance contributed by the second cubic crystalline optical element so as to substantially cancel and reduce retardance within the optical system (claim 92);); selected azimuthally rotation positioning the second set of lobes about an optical axis at location (a) azimuthally offset from the first set of locations of the first set of lobes and (b) azimuthally offset from midway between the first set of locations of the first set of lobes (claim 93) and two cubic crystalline optical elements have their respective different crystalline lattices selectively rotated with respect to each other and about the optical axis to reduce retardance within the optical system (claims 102 and 108 (note : claims 89 and 93 are allowed previous office action).

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art

McGuire (US 2003/0086171.A1) discloses a method for reducing aberration in optical system.

McGuire, Jr (US 2003 /0086156 A1) discloses a structure and methods for reducing aberration in optical system.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

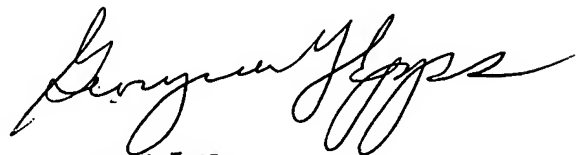
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272- 2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MH
November 18, 2004



Georgia Epps
Supervisory Patent Examiner
Technology Center 2800